

Amendment and Response
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Amendments to the Claims:

Please amend the claims to read as follows:

- 1 1. (currently amended) A method for managing a service across an
2 optical network over a dedicated circuit between a first and second
3 service termination points, the method comprising:
 - 4 generating a service performance report message at each of the
5 service termination points, each service performance report message
6 having service-specific information related to a performance of the service
7 as determined by the service termination point generating that service
8 performance report message, and each service performance report
9 message identifying the service to which the service-specific information
10 in that service performance report message pertains; and
 - 11 transmitting the service performance report message generated by
12 one of the service termination points to the other service termination
13 point over a service management channel to enable an assessment of the
14 performance of the service based on the service performance report
15 messages from both service termination points.
- 1 2. (original) The method of claim 1, further comprising monitoring the
2 service management channel from an intermediate network element that
3 is in the dedicated circuit between the service termination points to
4 determine a status of the service.
- 1 3. (original) The method of claim 1, further comprising determining from
2 the performance assessment whether the service is performing in
3 accordance with terms of a service level agreement governing the service.

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- 1 4. (original) The method of claim 1, wherein the step of generating a PRM
- 2 is a scheduled event.
- 1 5. (original) The method of claim 1, further comprising monitoring the
- 2 PRMs generated by the termination points at an intermediate network
- 3 element connected to the dedicated circuit between the termination
- 4 points.
- 1 6. (currently amended) The method of claim 6, further comprising
- 2 transmitting a service query command to each of the service termination
- 3 points over the service management channel.
- 1 7. (currently amended) The method of claim 16, further comprising
- 2 receiving a service report having service configuration information over
- 3 the service management channel from each of the service termination
- 4 points in response to the service query commands.
- 1 8. (original) The method of claim 1, further comprising transmitting a
- 2 command message over the service management channel to one of the
- 3 service termination points to change a state of that service termination
- 4 point.
- 1 9. (original) The method of claim 8, wherein the state of the service
- 2 termination point is a loopback condition, and further comprising
- 3 transmitting a test signal to that one service termination point to verify
- 4 connectivity.
- 1 10. (currently amended) An optical network for supporting a service
- 2 provided by a service provider over a dedicated circuit between service
- 3 termination points, the optical network comprising first and second

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4 network elements each disposed in the dedicated circuit of the service,
5 the first network element sending a message to the second network
6 element over an optical transport facility using a service management
7 channel capable of carrying the message across a network-to-network
8 interface, the message conveying service-specific information related to a
9 performance of the service over the dedicated circuit and identifying the
10 service to which the service-specific information in the message pertains.

1 11. (original) The optical network of claim 10, wherein the service
2 management channel includes a byte of a path overhead of an optical
3 transmission frame.

1 12. (original) The optical network of claim 10, wherein the service
2 management channel includes a field in a Generic Framing Procedure
3 client management frame.

1 13. (original) The optical network of claim 10, wherein the message is one
2 of a command message, a response to a command message, a service
3 performance report message, and a priority code message.

1 14. (original) The optical network of claim 10, wherein the first and second
2 network elements are edge service switches.

1 15. (original) The optical network of claim 10, wherein one of the first and
2 second network elements is a core service switch.

1 16. (original) The optical network of claim 10, wherein the service is one of
2 an asynchronous service, a synchronous service, a local area network
3 service, a storage area network service, and a managed wavelength
4 service.

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- 1 17. (previously presented) The optical network of claim 10, wherein the
- 2 first network element is in a first network managed by a first service
- 3 provider and the second network element is in a second network
- 4 managed by a second service provider.

- 1 18. (original) The optical network of claim 10, wherein the first and second
- 2 network elements are in a network managed by the service provider.

- 1 19. (currently amended) A network element connected at one end of a
- 2 dedicated circuit used to carry customer traffic associated with a service,
- 3 the network element comprising:
 - 4 a client interface receiving client signals from a client network;
 - 5 a service management channel entity deriving from the client
 - 6 signals service-specific information related to a performance of the
 - 7 service and generating a message in response to the service performance
 - 8 information, the message identifying the service to which the service
 - 9 performance information in the message pertains; and
- 10 a transport interface for mapping and adapting the client signals to
- 11 an optical transport facility, the transport interface transmitting the
- 12 message to a network element at the other end of the dedicated service
- 13 over a service management channel capable of carrying the message
- 14 across a network-to-network interface.

- 1 20. (currently amended) A network element connected between service
- 2 termination points located at opposite ends of a dedicated circuit used to
- 3 carry customer traffic associated with a service over a transport facility,
- 4 the network element comprising:
 - 5 a transport interface receiving customer traffic associated with the
 - 6 service; and

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7 a service management channel entity processing the customer
8 traffic received by the transport interface to access a message service.
9 specific performance information stored in a service management
10 channel of the transport facility by one of the service termination points,
11 the message containing service-specific performance information and
12 identifying the service to which the service-specific performance
13 information pertains.